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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,261	06/18/2004	Tudor Dawkins	BA9294USPCT	9344
7590 08/29/2007 E I du Pont de Nemours & Company Legal Patents Wilmington, DE 19898			EXAMINER BROWN, COURTNEY A	
			ART UNIT 1609	PAPER NUMBER
			MAIL DATE 08/29/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/500,261	Applicant(s) DAWKINS, TUDOR	
	Examiner Courtney A. Brown	Art Unit 1609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>11/09/2004</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

This application is a 371 of PCT/US03/04881 which claims benefit of provisional application 60/359,014 filed 02/20/2002.

Claims 1-14 are pending.

Claim Rejections- 35 U.S.C. § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is confusing because the steps are confusing. Applicant needs to claim the method in positive, clear, delineated steps. What constitutes a "series of doses"? How many is that? Also, there is no antecedent basis for "in the period" in claim 1 as well as "the locus", "the roots", "the surface", "the soil", "the growing season", and "the infestation period". In claim 8, there is no antecedent basis for "the initial application".

35 U.S.C. § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. 6,300,333 (Schapper et al.) in view of U.S. 3530220 (Buchanan et al.) and U. S. 2001/0049373 (Chalquest).

Applicant Claims

Applicant claims a method of protecting potatoes by controlling soil-inhibiting invertebrate pest selected from a group consisting of *Globodera pallida*, *Globodera*

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rostocniensis, *Trichodorus* spp., *Paratrichodorus* ssp., *Longidorus* spp., *Agriotes* spp., and *Phthorimaea operculella*; foliar-inhabiting invertebrate pest selected from a group consisting of *Leptinotarsa decemlineata*, *Empoasca fabae*, and *Wugterycyba jucunda*; and fungal diseases selected from a group consisting of *Phyophthora infestans* and *Alternaria solani* caused by a foliar-inhabiting pathogen. This method comprises applying a series of doses of an aqueous mixture containing an effective amount of a crop protecting agent selected from a group consisting of oxamyl, aldicarb, ethoprophos, fenamiphos, and fosphates to the locus of the roots of the crop plants by perforated or porous conduit (such as tubing or irrigation tape). Applicant also claims a method for protecting potatoes from *Globodera pallida* specifically using oxamyl.

Determination of the Scope and Content of the Prior Art (MPEP § 2141.01)

Schaper et al. teach the use of oxamyl (see column 20, lines 15-25) which is taught to be used as a crop protection product.

Schaper et al. teach (column 17, lines 57-64) that plant-parasitic nematodes, which can be controlled via the use of the invention, include those of genera *Globodera* such as *Globodera roschiensis* and *Globodera pallida*. In column 23, lines 22-27, Schaper et al. teach that the use of the invention for economically important transgenic crops of useful plants such as potatoes is preferred.

Additionally, Schaper et al. teach (column 21, line 66 to column 22, line 10) that the active ingredients of the said invention have outstanding fungicidal action on a variety of economically important phytopathogenic fungi such as *Phytophthora infestans*.

**Ascertainment of the Difference Between Scope of the Prior Art and the Claims
(MPEP §2141.012)**

Schaper et al. do not specifically teach potatoes being protected by oxamyl from *Globodera pallida* or the protection of potatoes from foliar-inhabiting invertebrate pest selected from a group consisting of *Leptinotarsa decemlineata*, *Empoasca fabae*, and *Wugterycyba jucunda* and fungal diseases selected from a group consisting of *Phytophthora infestans* and *Alternaria solani* caused by a foliar-inhabiting pathogen.

Schaper et al. also do not teach applying doses of an aqueous mixture containing the crop protection agent at the locus of the roots of the crop plant by means of a perforated or porous conduit.

Also, Schaper et al. do not teach applying the crop protection agent one week prior to planting to two days prior to harvest; applying at least two doses at least two days apart during the growing season of the crop or the infestation period of a pest being controlled; and an initial application in the series for a growing season made within seven days of the onset of the infestation period of a pest being controlled.

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Additionally, Schaper et al. do not teach the crop protection agent being applied in a series of 4 to 14 applications where the initial application is made within seven days of planting.

Buchanan et al. teach the use of alkyl 1-carbamoyl-N-(substituted carbamoyloxy) thioformimidates (which includes oxamyl) and their use as pesticides (column 1, lines 29-53). In columns 3, line 16 to column 4, line 51, Buchanan et al. teach that the pests controlled by the pesticides include the potato leafhopper- *Empoasca fabae* and the potato rot nematode-*Ditylenchus destructor*. Additionally, in column 9, lines 8-19, Buchanan et al. teach use of the pesticides prior to or during planting of potatoes. In the same column, Buchanan et al. teach applying the pesticides to the locus of a plant where both plant-parasitic nematodes(*Globodera pallida*) and fungi (*Phyophthora infestans* and *Alternaria solani*) are present.

Chalquest teaches (paragraphs 0321-0326) the admixing of one or more additional active ingredients such as nematicides (oxamyl) with their active compound(s) which modify the behavior of nematodes.

Chalquest teaches (paragraph 0182) that the invention can be applied to the living and feeding areas of plants. Chalquest teach that the composition can be applied by drip and drench (through tubing or irrigation tape) techniques directly to the base of plants or to the soil root zone. Chalquest teaches that this procedure is particularly applicable for potatoes.

Additionally, in (paragraph 0192), Chalquest teaches that ovicidal(killing the eggs of nematodes) compositions of the invention are useful for pre and post plant applications.

***Finding of Prima Facie Obviousness Rational and Motivation
(MPEP §2142-2143)***

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the teachings of Schapper et al and Buchanan et al. to devise a method of protecting crop plants, specifically potatoes, from the pest *Globodera pallida* using oxamyl. The potato crop is an important crop whose production is frequently affected by nematode pests such as *Globodera pallida*. Since alkyl 1-carbamoyl-N-(substituted carbamoyloxy) thioformimidates are used to protect potatoes from nematodes, it would have been obvious to use a compound, oxamyl, from this group, as a crop protection agent for potatoes. It would also be obvious to use this agent to protect potatoes from the pest, *Globodera pallida*, which is a cyst nematode.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the teachings of Schapper et al and Buchanan et al. to devise a method to protect potatoes from foliar-inhabiting invertebrate pest selected from a group consisting of *Leptinotarsa decemlineata*, *Empoasca fabae*, and *Wugterycyba jucunda* and fungal diseases selected from a group consisting of

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Phyophthora infestans and *Alternaria solani* caused by a foliar-inhabiting pathogen because these pests and fungal diseases are common among potato plants.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the teachings of Buchanan et al. and Chalquest to devise a method to protect crop plants by applying the crop protecting agent to the locus of the roots in the soil of the crop plants by perforated or porous conduit (such as tubing or irrigation tape) because potatoes grow underground. It would be obvious to apply the crop-protecting agent prior to planting and during growth because this would kill nematodes and their eggs that already exist in the soil and the post planting application would kill those nematodes that were not killed during the pre application and those nematodes that appear during growing season. Additionally, it is routine optimization for one of ordinary skill in the art to adjust application amounts and timing to optimize the desired results.

No claims are allowed.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR Only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

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Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Courtney Brown, whose telephone number is 571-270-3284. The examiner can normally be reached on Monday-Friday from 8 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, Jeffrey Stucker can be reached on 571-272-0911. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

A handwritten signature, possibly reading 'AB', is located on the left side of the page.A handwritten signature of Michael Meller is located on the right side of the page.

**MICHAEL MELLER
PRIMARY EXAMINER**